REMARKS

By the paper mailed February 28, 2003, the Examiner objected to the drawings as being informal. Enclosed herewith is a new set of formal drawings.

The Examiner further objected to figure 3 of the drawings as lacking a solenoid assembly 32 as introduced on page 8 of the Specification. By this amendment, the Specification has been amended to correct a typographical error and correctly identify the solenoid assembly as "39". This amendment renders correction of figure 3 of the drawings unnecessary.

The Specification was objected to as incorrectly identifying the block-like operating members as "34" instead of "38". The Specification has been amended to correct this deficiency.

Claim 8 was rejected under 35 U.S.C. 112. This claim has been amended to correct the deficiency noted by the Examiner.

At this time, applicant's attorney would like to thank the Examiner for his kind assistance in pointing out the informalities in the application.

Claims 1 through 11 were rejected under 35 U.S.C. 102(b) as being anticipated by Gush et al. By this amendment, independent claims 1 and 6 have been amended and, for reasons presently to be described, as amended, are believed clearly distinguishable from and allowable over Gush et al.

Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Gush et al. in view of Weihsmantel et al. This claim, which depends on amended claim 6 now partakes of the allowability of amended claim 6.

Claims 13 through 17 were rejected under 35 U.S.C. 102(b) as being anticipated by Weihsmantel et al. Claim 13 has been amended and, for reasons presently to be discussed, as amended is believed clearly distinguishable from Weihsmantel et al.

Claim 14 has been cancelled.

For reasons presently to be discussed, claims 15 through 17 as originally filed are believed clearly allowable as originally filed.

Turning to the references of record, the patent to Gush et al. concerns a method and apparatus for posterior photocuring of photocurable compositions. The Gush et al. apparatus includes a housing having an actinic light source disposed in the lower portion of the housing and a platform adapted to receive thereon a supported liquid photocurable composition which can be exposed to actinic light through an image bearing transparency and which is selectively insolubilized in the exposed portions thereof.

As discussed on page 11 of the Specification, of the present application a very important aspect of the apparatus of the invention is the novel control and timer means of the apparatus. As pointed out on page 11 of the Specification, the

data input means of the apparatus is used to input to the timer means a signal corresponding to a first selected interval of time during which the shutter means is to remain closed following the energization of the array of ultraviolet lamps. This time delay is necessary to enable the lamps to reach their full energization level prior to opening the shutter means to expose to radiation the specimen, such as a polynucleotide, which is disposed within the housing 16. Only in this way, can the amount of radiation received by the specimen be accurately and precisely controlled.

By this amendment claims 1 and 6 have been amended to more clearly define the important timing means of the apparatus of the invention and its function in ensuring that the shutter means remains closed until the lamps reach their full energization level. This important feature is nowhere disclosed or remotely suggested by Gush et al.

With regard to the patent to Weihsmantel et al, this patent concerns a photographic contact printer used for exposing sensitized materials. The device includes a cabinet having a high intensity light source mounted within the lower portion of the cabinet with the reflector fixedly mounted on the cabinet for directing a uniform beam of light toward the top of the cabinet where a printing frame is pivotally mounted.

Like the patent to Gush et al., Weihsmantel et al fails to disclose the important timer means of the present application and the critical function it performs as now specifically defined in amended claim 13.

With regard to claim 14, which depends on claim 13 and which defines the critical function of the timer means, the Examiner relies on Column 5, lines 19-21 of Weihsmantel et al. in attempting to meet these important limitations and states, "The further steps of determining the time prior required for initial energization of the source of radiation to achieving a maximum radiation output from the source of radiation and, after energizing the source of radiation maintaining the shutter means in a first closed position until the expiration of said time period required from initial energization of the source of radiation to achieving maximum radiation output from the source of radiation. (column 5, line 19 through 21: the warmup period)".

However, Weihsmantel et al at line 7 of column 5, states that "...the lamp 12 is at a full or exposure level intensity during starting and warmup." Continuing at line 18 of column 5, the patent states, "During warmup, the shutter assembly is opened to allow proper heating of lamp 12 by energization coil 260." (emphasis added).

Since it is clear from the Weihsmantel et al specification that the lamp 12 is at full exposure level intensity during both the starting and warmup, there is no

need for the timer to maintain the shutter in a closed position until the source of radiation reaches its full energization level as now required by the amended claims and of the present application as was initially required by claims 15 through 17 as originally filed. In point of fact, Weihsmantel et al. appears to teach away from this critical aspect of applicant's invention as now claimed. Leaving the shutter assembly open during warmup, as taught by Weihsmantel et al., will not permit the amount of radiation received by the specimen to be accurately and precisely controlled.

With regard to new claim 18, this claim defines the apparatus as being an apparatus for irradiating a polynucleotide which comprises a housing having an upper portion, a lower portion, and an internal chamber disposed between said upper and lower portions. Further, unlike the prior art relied upon by the Examiner, claim 18 specifically defines the source of radiation as being disposed within the upper portion of the housing. As in amended claims 1 and 6, claim 18 also defines the control means as comprising a timer which ensures that the shutter means remains closed until the full energization of the array of ultraviolet lamps.

New claim 19 depends on new claim 18 and defines the important safety feature of the apparatus which insures that if the drawer is opened, the source of radiation is automatically de-energized. This important feature of the invention is nowhere disclosed or suggested by the prior art of record.

It is respectfully submitted that the elements of new claim 18 are neither disclosed nor remotely suggested by the references of record.

The application as amended is now believed in condition for allowance and such favorable action is respectfully requested.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in the envelope addressed to: Commissioner of Patents, Post Office Box 1450, Alexandria, VA. 22213-1450 on July 28, 2003

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